



Draft Service and Performance Plan 2021/22

Nogoa Mackenzie Bulk Water Service Contract

8 December 2020

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At a glance

Our performance in 2019/20

 **Operating costs:**
\$2.88 million (16.2% more than forecast)


Key drivers of cost variance:

- higher operations costs following the transfer of the Nogoia Mackenzie (Emerald) service contract to local management arrangements
- higher than forecast insurance costs.


 **Annuity-funded costs:**
\$0.72 million (62.9% less than forecast)

Negotiations in relation to the handover of town water facilities to the Central Highlands Regional Council were not finalised and a decision was made to put on hold associated works at the water treatment plant. All future costs in relation to the town water facilities will not be passed on to customers.

Key annuity-funded projects that were undertaken in 2019/20 included bathymetric surveys at Fairbairn Dam and Selma and Town Weirs, and comprehensive inspections at the scheme’s weirs.


 **Total water deliveries:**
124,117 ML

Water delivered to irrigators: 102,493 ML

 **Service targets: Met**


No exceptions

Outlook for 2021/22

 **Forecast operating costs:**
\$2.39 million

Significant areas of expenditure:

- insurance (\$0.78 million)
- operations (\$0.99 million)
- preventative maintenance (\$0.35 million).

 **Forecast annuity-funded costs:**
\$0.12 million

Key projects planned:

- upgrade program to replace customer river meters with AS4747 compliant equipment (\$0.11 million)
- scheduled refurbishment of Bingegang weir outlet and protection works (\$0.01 million).

Introduction

This Service and Performance Plan (S&PP) details a range of proposed scheme activities and projects, and presents a breakdown of anticipated costs for review. It also compares Sunwater’s actual costs for 2019/20 with our previous forecasts for this scheme.

The purpose of this year’s S&PP for the Nogo Mackenzie Bulk Water Service Contract is to:

- present to customers Sunwater’s projected costs¹ for the upcoming five-year period, i.e. 2021/22 to 2025/26
- consult with our customers on forecast operating and annuity-funded costs for 2021/22 and the forward program of works
- examine Sunwater’s performance in 2019/20 against previous forecasts and service targets.

Our focus during 2021/22 will be on ensuring efficient water delivery, meter reliability and safety compliance is maintained. In addition, refurbishment and corrective work identified through our annual and five yearly comprehensive inspections will be implemented safely, timely and efficiently.

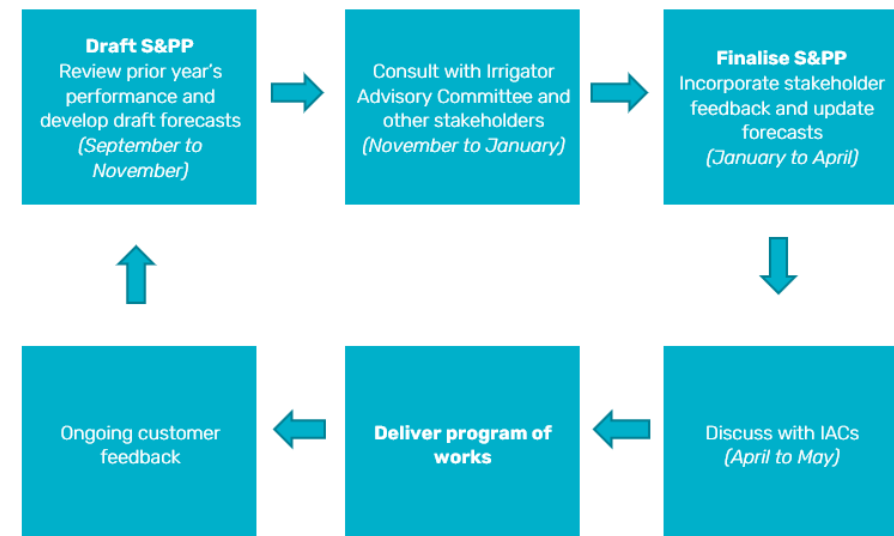
In addition to this S&PP, Sunwater has published an information sheet which explains the types of costs we incur in delivering water to our customers and how those costs are allocated to service contracts. The information sheet is available at:

www.sunwater.com.au/customer/products-and-services/service-and-performance-plans/

¹ All financial figures reported in this document are in nominal dollars, i.e. dollars of the day. Figures may not sum due to rounding.

Input from customers is a valuable part of Sunwater’s planning process and ensures that we invest in areas which support the services we provide to customers. Figure 1 outlines how Sunwater and customers work together in relation to S&PPs.

Figure 1: Customer consultation and S&PPs



We welcome and encourage your feedback on this S&PP. To have your say and shape future S&PPs, please contact us via email or post:

Email: sppfeedback@sunwater.com.au

Post: S&PP Feedback
PO Box 15536
City East Qld 4002

Delivering services to our customers

At Sunwater we are committed to working collaboratively with our customers to deliver value and fit-for-purpose water solutions.

Our customers

Most customers in this scheme are irrigators of cotton, citrus (mandarins, oranges and lemons) and grapes. Other crops irrigated include wheat, pulse crops, sorghum, maize, lucerne, oats, macadamias and sunflowers.

Water from Fairbairn Dam is released down the Nogoa River to Selma Weir for supply to the town of Emerald and is released to supply coal mining developments on the Bowen Basin.

The water allocations for each customer segment are included in Table 1, together with water deliveries in 2019/20. Historical total water usage is available in **Appendix 1**.

Table 1: Water allocations and usage data¹

Customer segment	Total water allocations (ML)	High priority water allocations (ML)	Medium priority water allocations (ML)	Total water deliveries 2019/20 (ML)
Irrigation	191,780	9349	182,431	102,493
Industrial	28,146	25,727	2419	15,273
Urban	8548	8459	90	6310
Sunwater (excl. distribution losses)	3071	2279	792	41
Sunwater distribution losses	313	313	0	0
Total	231,859	46,127	185,732	124,117

1. Includes bulk water, Blackwater Pipeline and the Gregory, Oakey Creek and Saraji Offtakes.

Irrigation charges

The 2021/22 charges and cost per megalitre from the Queensland Competition Authority's (QCA) 2020–2024 irrigation price investigation are shown in Table 2. The Nogoa Mackenzie Bulk Water Service Contract is not expected to fully recover irrigation's share of costs.

Table 2: Irrigation charges for 2021/22¹

Tariff group	Product	2021/22 (\$/ML) ²	QCA cost-reflective (\$/ML) ³	Subsidy (\$/ML) ⁴
Bulk water – Medium priority	Allocation Charge – Part A	12.22	6.79	n/a
	Allocation Water – Part B	0.86	0.86	n/a
Bulk water – High priority	Allocation Charge – Part A	35.05	47.58	12.52
	Allocation Water – Part B	0.86	0.86	n/a
Bulk water – Local management supply – Medium priority	Allocation Charge – Part A	6.79	6.79	n/a
	Allocation Water – Part B	0.86	0.86	n/a
Bulk water – Local management supply – High priority	Allocation Charge – Part A	35.05	47.58	12.52
	Allocation Water – Part B	0.86	0.86	n/a

1. This table includes bulk water charges only. Distribution charges are set by Fairbairn Irrigation Network Ltd.
2. As recommended by the QCA (excluding dam improvement costs). The Queensland Government has not yet determined the irrigation charges to apply in 2021/22.
3. Reflects the cost-reflective price determined by the QCA in its 2020–2024 irrigation price investigation (excluding dam improvement costs). Costs reflect lower bound cost recovery, i.e. recovery of future replacement and ongoing maintenance and operations. Charges do not allow for any returns on existing assets.
4. The Queensland Government provides a separate Community Service Obligation to Sunwater for irrigators' share of prudent and efficient dam improvement costs, as determined by the QCA.

For more information on Sunwater's fees and charges, refer to: www.sunwater.com.au/customer/fees-and-charges/

Service targets

Sunwater and customers have agreed Water Supply Arrangements and Service Targets for the Nogo Mackenzie Bulk Water Service Contract. Table 3 below sets out our recent performance against selected service targets for this scheme.

Table 3: Scheme service targets and performance

Service target		Target	Number of exceptions		
			2017/18	2018/19	2019/20
Planned shutdowns – notification	For shutdowns planned to exceed 2 weeks	4 weeks	0	0	0
	For shutdowns planned to exceed 3 days	2 weeks	0	0	0
	For shutdowns planned to be less than 3 days	5 days	0	0	0
Unplanned shutdowns – duration ¹	Unplanned shutdowns during Peak Demand Period	48 hours	0	0	0
	Unplanned shutdowns outside Peak Demand Period	5 working days			
Maximum number of interruptions	Planned or unplanned interruptions per water year	6	0	0	0

1. This is the number of times that the unplanned shutdown has exceeded the shortest of the peak/off peak periods.

In addition, Sunwater has company-wide customer interactions service targets. Our performance in 2019/20 against these service targets is shown in Table 4.

Table 4: Customer interactions service targets and performance

Service target	Target	2019/20
Telephone answering ¹	80.00%	94.87%
Requests actioned within Service Level Agreement (SLA) timeframes ²	> 95.00%	95.46%

1. This target measures the percentage of 13 15 89 calls that are answered within 60 seconds. The 2019/20 result reflects the average monthly performance over the November 2019 to June 2020 period.
2. This target measures the percentage of email or workflow requests (such as property transfers and temporary transfers) to the Customer Support email address that are completed within the agreed SLAs. The SLA timeframes range between two and 10 business days, depending on the request. The 2019/20 result covers the October 2019 to June 2020 period.

Key infrastructure

Table 5 lists the key infrastructure used to deliver bulk water services to our customers in Nogo Mackenzie.

Table 5: Key infrastructure

Asset	Description	Total storage capacity (ML)
Fairbairn Dam	Earth and rock fill clay-core embankment, complemented by six secondary earth and rock fill saddle dams. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	1,301,000
Bedford Weir	Mass concrete weir.	17,973
Bingegang Weir	Mass concrete weir.	8060
Selma Weir	Mass concrete weir.	1180
Tartrus Weir	Ogee-crested mass concrete weir.	12,000

Financial summary—Revenue and expenditure

A high-level summary of the budgeted financial performance of the Nogoa Mackenzie Bulk Water Service Contract is presented in Table 6.

The revenue Sunwater receives from urban and industrial customers is agreed by term contract. The revenue we receive from irrigation customers is determined by the Queensland Government, based on recommendations made by the QCA as part of its review of irrigation prices.

Sunwater anticipates an increase in revenue for the Nogoa Mackenzie Bulk Water Service Contract in 2021/22.

In 2021/22, Sunwater expects to spend \$489 million across all parts of our business, i.e. regulated and non-regulated. A breakdown of the forecast total cost pool at the direct and non-direct cost level is shown in Figure 2, together with the percentage of these costs allocated to the Nogoa Mackenzie Bulk Water Service Contract. Detail on the planned spend for this scheme is outlined on subsequent pages of this S&PP.

Figure 2: Total Sunwater cost pools and allocation to scheme—2021/22 forecast (\$M)

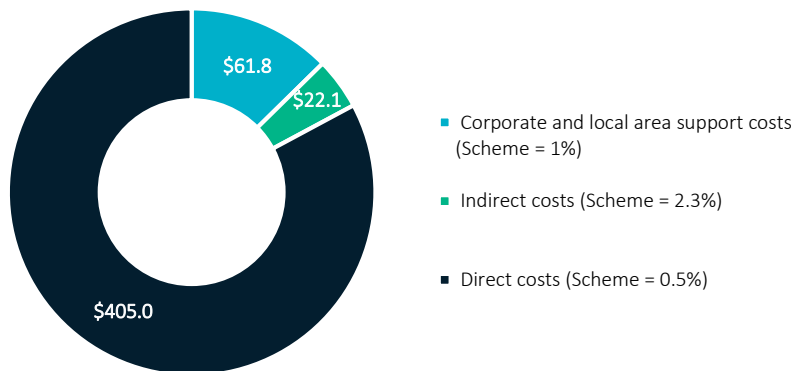


Table 6: Service contract financial summary

Nogoa Mackenzie Bulk Water Service Contract	2017/18 Actual \$'000	2018/19 Actual \$'000	2019/20 Actual \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000
Revenue					
Irrigation	1128.9	937.9	2334.4	1694.2	1724.7
Community Service Obligation	-	-	-	-	-
Industrial ¹	2669.4	3018.7	3114.4	2295.4	2383.9
Urban ¹	429.3	465.5	440.1	327.9	335.5
Revenue transfers ²	1333.1	1285.1	266.5	359.4	368.4
Drainage	-	-	-	-	-
Other	4.3	5.5	8.6	3.0	3.1
Revenue total	5565.1	5712.7	6164.0	4679.9	4815.6
Less – Operating expenditure	2204.1	2629.5	2883.6	2869.2	2952.4
Less					
Annuity-funded	1054.1	595.8	724.4	494.9	121.8
Non-annuity funded ³	32,994.1	32,085.1	45,097.3	20,589.6	225.1
Surplus (deficit)	(30,687.3)	(29,597.6)	(42,541.4)	(19,273.9)	1516.3

- Forecast revenues for industrial and urban customers are based on current contractual arrangements.
- Revenue transfers represent the cost of bulk water supplies delivered through the distribution system and the Blackwater Pipeline. Since the transfer of the distribution system to Fairbairn Irrigation Network Ltd on 30 June 2019, Fairbairn Irrigation Network has been invoiced directly for its contribution to the cost of the bulk water service. Therefore, this revenue is now part of "Irrigation" revenue. For Blackwater Pipeline, the revenue accrues to the pipeline system before it is transferred to the Bulk Water Service Contract as a contribution to the cost of the bulk water service.
- This is expenditure which has not been funded by irrigation customers. An example of this in the Nogoa Mackenzie Bulk Water Service Contract is the Dam Improvement Program.

Cost of delivering services—Operating expenditure

Operating expenditure includes funds for: operations activities, i.e. operations, electricity and insurance; preventative maintenance; and corrective maintenance.

Table 7 sets out actual and forecast operating expenditure for the Nogo Mackenzie Bulk Water Service Contract. For a more detailed breakdown by cost category, refer to **Appendix 2**.

Our performance in 2019/20

In 2019/20, operating costs were more than what we previously forecast.² This was primarily due to higher operations costs, following the transfer of the Nogo Mackenzie (Emerald) Distribution Service Contract to Fairbairn Irrigation Network Ltd. Specifically, a higher level of direct management and non-direct costs were allocated to the bulk water service contract.

Table 7: Operating expenditure¹

Nogo Mackenzie Bulk Water Service Contract	2017/18	2018/19	2019/20			2020/21		2021/22		2022/23	2023/24	2024/25	2025/26
	Sunwater Actual \$'000	Sunwater Actual \$'000	Sunwater Forecast \$'000	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000 ²	Sunwater Forecast \$'000	QCA Target \$'000 ²	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
Operations	1593.3	2001.0	1898.8	2319.9	421.1	1741.0	1740.8	1789.6	1777.3	1872.6	1891.6	1976.6	1997.3
Electricity	38.0	43.1	18.0	57.9	39.9	18.0	19.0	18.5	19.3	18.9	19.4	33.1	33.9
Insurance	463.6	495.5	546.7	561.5	14.9	758.8	624.1	777.8	636.5	797.2	817.1	837.6	858.5
Operations	1091.7	1462.5	1334.1	1700.5	366.3	964.2	1097.8	993.4	1121.4	1056.5	1055.0	1105.9	1104.9
Preventative maintenance	424.3	361.7	366.8	314.1	(52.7)	334.7	256.7	345.4	262.3	373.3	369.7	391.6	393.2
Corrective maintenance	186.5	266.8	215.6	249.6	33.9	251.9	137.1	259.4	140.0	276.3	276.2	289.9	292.8
Operating costs total	2204.1	2629.5	2481.2	2883.6	402.4	2327.7	2134.6	2394.4	2179.5	2522.2	2537.5	2658.2	2683.3
Recreational facility costs ³						541.5		558.0		595.7	593.9	624.1	625.3
Operating costs total (incl. recreational facility costs)	2204.1	2629.5	2481.2	2883.6	402.4	2869.2		2952.4		3117.9	3131.4	3282.3	3308.6

1. Sunwater's 2021/22 to 2025/26 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.
2. Reflects the QCA's 2020–2024 irrigation price investigation final recommendations. Excludes recreational facility costs.
3. From 1 July 2020, irrigation customers no longer contribute towards the cost of operating and maintaining recreational facilities. Forecast costs have been separately identified for transparency.

² See the 2019/20 Network Service Plan at www.sunwater.com.au/schemes/Nogo-Mackenzie/

Outlook for 2021/22

Operations

Nogoa Mackenzie Bulk Water Service Contract's total operations budget in 2021/22 is 0.7 per cent above the QCA's recommended cost target.

Sunwater anticipates that insurance and other costs will be higher than allowed, while Sunwater's budget for operations labour and contractor use is lower.

Insurance

Insurance is one of Sunwater's largest expenditure items. These costs have increased significantly in recent years due to multiple flood events in Queensland and global insurable events impacting premiums. Although Sunwater is subject to market forces in the pricing of insurance premiums, we have also been actively managing insurance premium costs by reviewing coverage levels and policy specifications (including deductibles) to ensure that our insurance coverage is appropriate and reflective of the risks faced by our business.

In 2020/21, Sunwater experienced a significant price increase in insurance premiums. Our insurance broker has indicated this is the beginning of an

upward trend in premiums due to, among other factors, the number and size of natural disasters that have occurred in Australia over the past 12 months. Insurance premiums in 2021/22 are therefore expected to be higher than the QCA's recommended allowance and historical costs.

Preventative maintenance

The forecast preventative maintenance costs for the Nogoa Mackenzie Bulk Water Service Contract are 31.7 per cent above the QCA's recommended cost target. This is because of an increase in non-direct costs but is also the result of the two and five yearly preventative maintenance items falling due in 2021/22.

Corrective maintenance

In 2021/22, Sunwater anticipates spending \$259.4k on corrective maintenance in the Nogoa Mackenzie Bulk Water Service Contract. This is 85.3 per cent above the QCA's recommended cost target, primarily due to higher than allowed labour and non-direct costs. However, the expenditure is broadly consistent with historical expenditure and the 2020/21 budget.

Cost of delivering services—Annuity and non-annuity funded expenditure

Annuity expenditure include funds for preventative and corrective maintenance, as well as large, one-off operations activities. The preventative maintenance activities monitor the asset condition and inform the corrective maintenance program when an asset needs to be refurbished or replaced. Non-annuity funded expenditure largely relates to Sunwater’s Dam Improvement Program and recreational facility costs.

Table 8 outlines our annuity and non-annuity funded expenditure. A comparison of forecast and actual annuity-funded projects for 2019/20 is provided in **Appendix 3**, with details of the major annuity-funded projects planned for the 2020/21 to 2025/26 period set out in **Appendix 4**.

Table 8: Annuity and non-annuity funded expenditure^{1,2}

Nogoa Mackenzie Bulk Water Service Contract	2017/18	2018/19	2019/20		Variance \$'000	2020/21		2021/22		2022/23	2023/24	2024/25	2025/26
	Sunwater Actual \$'000 ³	Sunwater Actual \$'000 ³	Sunwater Forecast \$'000	Sunwater Actual \$'000		Sunwater Forecast \$'000	QCA Target \$'000 ⁴	Sunwater Forecast \$'000	QCA Target \$'000 ⁴	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
Annuity-funded													
Operations	9.0	-	1086.1	-	(1086.1)	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
Planned corrective maintenance	1045.2	595.8	866.5	724.4	(142.2)	494.9	118.0	121.8	178.1	1001.6	426.0	763.8	2414.0
Unplanned corrective maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
Annuity-funded total	1054.1	595.8	1952.6	724.4	(1228.3)	494.9	118.0	121.8	178.1	1001.6	426.0	763.8	2414.0
Non-annuity funded													
Dam Improvement Program	33,014.9	32,085.1	49,902.0	45,087.6	(4814.4)	19,268.8	-	-	-	-	-	-	-
Recreational facility projects						1320.9		225.1		820.9	1906.0	147.9	557.9
Metered offtakes and dividend reinvestment	(20.7)	-	-	9.7	9.7	-		-		-	-	-	-
Non-annuity total	32,994.1	32,085.1	49,902.0	45,097.3	(4804.7)	20,589.6		225.1		820.9	1906.0	147.9	557.9

1. Sunwater’s 2021/22 to 2025/26 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.
2. Forecast annuity-funded costs from 2020/21 exclude recreational facility projects.
3. The annuity-funded spend for 2017/18 and 2018/19 reflects the QCA’s 2020–2024 irrigation price investigation final recommendations, which included adjustments to Sunwater’s actual costs.
4. Reflects the QCA’s 2020–2024 irrigation price investigation final recommendations.

Asset management and planning improvements

In its final report for the 2020–2024 irrigation price investigation, the QCA identified several potential improvements to Sunwater’s asset management and planning framework. It suggested Sunwater should:

- improve our predictive maintenance and asset condition reporting arrangements to better inform the timing of asset replacement
- review our cost estimation approach and ensure that asset values are based on modern equivalent replacement values where appropriate
- develop transparent guidelines for options analyses.³

Sunwater acknowledges there is room for improvement in our asset management system and is working on several initiatives to address specific potential improvements and the broader asset management and planning processes as outlined below. We will report on our progress on the implementation of these initiatives in the final S&PP for 2021/22.

Asset management performance growth

This initiative provides the opportunity to improve predictive maintenance capability and focuses on monitoring asset performance data of critical assets. The asset data will provide a greater insight into asset performance, condition, and refurbishment and replacement planning.

Asset management planning

A change to Sunwater’s asset planning cycle has improved the near-term cost estimation of annuity-funded work. The change targets 18 months of fully cost-estimated work and will help improve future asset replacement values.

Asset management improvement

Sunwater is implementing improvements to our asset management system with a fit for purpose alignment to the ISO55001 asset management standard. Key to the alignment is the simplification of how we identify and deliver maintenance work. Low value, low complexity work follows a standard work management methodology and is managed at a service contract level. High value, high complexity work is managed at an individual level and follows Sunwater’s Portfolio, Program and Project Management Framework (P3MF). P3MF defines the management and governance of projects including when an options analysis is required.

³ See pages 58 to 60, www.qca.org.au/wp-content/uploads/2020/02/irrigation-price-review-part-b-sunwater-final-report.pdf

Annuity balance

Annuities are managed by Sunwater on behalf of each service contract. They allow for customer charges to reflect a constant amount necessary to recoup the costs of refurbishment/replacement of the assets over a pre-determined period of time. The forecast annuity balances, and the impacts of budgeted spend, are shown in Table 9 below.

The QCA and Sunwater closing balances differ due to differences in the expenditure profile allowed by the QCA in its 2020–2024 final recommendations and actual expenditure incurred by Sunwater in 2019/20 and what we expect to spend thereafter.

Table 9: Annuity balance

Nogoa Mackenzie Bulk Water Service Contract	2017/18 Actual \$'000	2018/19 Actual \$'000	2019/20 Actual \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000	2024/25 Forecast \$'000	2025/26 Forecast \$'000
Opening balance ¹	(3294.2)	(4112.9)	(4522.6)	(5079.2)	(4526.2)	(3543.8)	(3355.3)	(2522.8)	(2485.4)
Spend ²	(1054.1)	(595.8)	(724.4)	(494.9)	(121.8)	(1001.6)	(426.0)	(763.8)	(2414.0)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-	-
Annuity contribution ³	482.1	494.2	506.5	1270.0	1302.1	1345.1	1405.1	911.5	998.0
Interest/financing costs	(246.7)	(308.1)	(338.7)	(222.1)	(197.9)	(154.9)	(146.7)	(110.3)	(108.7)
Sunwater – Closing balance	(4112.9)	(4522.6)	(5079.2)	(4526.2)	(3543.8)	(3355.3)	(2522.8)	(2485.4)	(4010.1)
QCA – Closing balance	(4112.9)	(4522.6)	(5904.0)	(5010.1)	(4105.2)	(3949.9)	(3249.0)		
Difference	-	-	824.7	483.9	561.4	594.7	726.2		

1. The opening balances for 2017/18, 2018/19 and 2019/20 reflect the QCA's 2020–2024 irrigation price investigation final recommendations.
2. The spend for 2017/18 and 2018/19 reflects the QCA's 2020–2024 irrigation price investigation final recommendations, which included adjustments to Sunwater's actual costs. The 2019/20 spend reflects Sunwater's actual costs. Thereafter, the spend is based on Sunwater's forecasts.
3. The annuity contribution is included in the prices paid by customers. It was set by the QCA from 2012/13 to 2016/17 and was rolled forward with the Consumer Price Index (CPI) for 2017/18, 2018/19 and 2019/20. From 2020/21 to 2023/24, the annuity contribution is based on the QCA's 2020–2024 irrigation price investigation final recommendations. Thereafter, it is based on Sunwater's projections.

Appendix 1—Historical water usage

The below table contains the scheme's recent water use, together with the 18-year average for the 2002/03 to 2019/20 period.

Year	Usage (ML)
2010/11	78,314
2011/12	169,236
2012/13	166,681
2013/14	189,851
2014/15	157,152
2015/16	183,846
2016/17	168,908
2017/18	178,911
2018/19	119,961
2019/20	124,117
18-year historical average	159,687

Appendix 2—Operating and annuity-funded costs by expense type

Nogoa Mackenzie Bulk Water Service Contract	2017/18	2018/19	Sunwater Forecast \$'000	2019/20	Variance \$'000	2020/21		2021/22		2022/23	2023/24	2024/25	2025/26
	Sunwater Actual \$'000	Sunwater Actual \$'000		Sunwater Actual \$'000		Sunwater Forecast \$'000	QCA Target \$'000	Sunwater Forecast \$'000	QCA Target \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
Operating costs													
Operations	1593.3	2001.0	1898.8	2319.9	421.1	1741.0	1740.8	1789.6	1777.3	1872.6	1891.6	1976.6	1997.3
Labour	255.9	320.6	287.8	399.0	111.2	186.1	249.4	191.7	255.2	197.4	202.4	207.4	212.6
Contractors	144.0	138.5	175.0	205.2	30.2	122.3	125.8	125.4	128.4	128.5	131.7	135.0	138.4
Materials	15.8	19.5	20.0	18.1	(1.9)	14.8	21.9	15.2	22.3	15.6	16.0	16.4	16.8
Electricity	38.0	43.1	18.0	57.9	39.9	18.0	19.0	18.5	19.3	18.9	19.4	33.1	33.9
Insurance	463.6	495.5	546.7	561.5	14.9	758.8	624.1	777.8	636.5	797.2	817.1	837.6	858.5
Other	104.5	168.8	177.5	271.6	94.2	159.2	109.8	162.8	112.0	165.1	167.7	170.6	173.7
Local area support costs	197.8	298.4	160.3	230.9	70.6	107.6	120.3	110.8	122.9	114.1	117.0	119.9	122.9
Corporate support costs	135.4	295.8	214.9	304.6	89.7	139.6	192.5	143.8	196.7	148.1	151.8	155.6	159.5
Indirect costs	238.4	221.0	298.6	271.0	(27.6)	234.6	278.1	243.8	284.1	287.7	268.5	301.1	281.1
Preventative maintenance	424.3	361.7	366.8	314.1	(52.7)	334.7	256.7	345.4	262.3	373.3	369.7	391.6	393.2
Labour	113.8	92.1	97.6	82.9	(14.7)	91.3	75.4	94.1	77.2	96.9	99.3	101.8	104.3
Contractors	78.1	48.5	50.0	60.1	10.1	37.1	23.2	38.0	23.6	38.9	39.9	40.9	41.9
Materials	2.1	5.6	5.0	2.3	(2.7)	3.7	2.8	3.8	2.9	3.9	4.0	4.1	4.2
Other	6.6	7.2	12.0	4.1	(7.9)	8.9	6.9	9.1	7.1	9.3	9.6	9.8	10.1
Local area support costs	88.8	91.4	61.5	45.8	(15.7)	54.8	36.4	56.4	37.2	58.1	59.6	61.1	62.6
Corporate support costs	48.7	75.0	72.9	63.0	(9.9)	68.5	58.2	70.5	59.5	72.7	74.5	76.3	78.3
Indirect costs	86.2	41.9	67.8	55.9	(11.9)	70.5	53.7	73.4	54.9	93.5	82.9	97.6	91.9
Corrective maintenance	186.5	266.8	215.6	249.6	33.9	251.9	137.1	259.4	140.0	276.3	276.2	289.9	292.8
Labour	14.6	18.7	35.8	24.3	(11.5)	49.0	22.4	50.4	22.9	51.9	53.2	54.6	55.9
Contractors	110.7	156.4	75.0	160.0	85.0	74.1	45.0	76.0	45.9	77.9	79.8	81.8	83.9
Materials	19.6	19.2	20.0	13.6	(6.4)	14.8	11.0	15.2	11.3	15.6	16.0	16.4	16.8
Other	6.7	29.7	15.0	3.3	(11.7)	11.1	14.5	11.4	14.8	11.7	12.0	12.3	12.6
Local area support costs	11.4	18.4	18.2	13.5	(4.6)	28.4	10.8	29.2	11.1	30.1	30.9	31.6	32.4
Corporate support costs	12.5	18.7	26.7	18.9	(7.9)	36.7	17.3	37.8	17.7	39.0	39.9	40.9	41.9
Indirect costs	11.0	5.6	24.9	15.9	(9.0)	37.8	16.0	39.4	16.3	50.1	44.4	52.3	49.2
Operating costs total	2204.1	2629.5	2481.2	2883.6	402.4	2327.7	2134.6	2394.4	2179.5	2522.2	2537.5	2658.2	2683.3
Annuity-funded costs													
Labour			120.7	65.8	(54.9)	37.2	8.9	12.0	17.5	127.8	18.6	125.5	388.6
Contractors			264.9	445.9	181.0	98.0	23.4	29.4	43.0	163.2	313.4	105.6	505.4
Materials			1333.4	57.6	(1275.8)	280.8	67.0	53.8	78.7	411.8	52.9	239.0	443.6
Other			(0.0)	25.1	25.1	1.4	0.3	1.8	2.6	2.9	0.5	13.5	218.9
Local area support costs			59.7	36.0	(23.7)	20.8	5.0	6.4	9.3	76.7	11.0	65.8	223.7
Corporate support costs			90.1	53.1	(37.0)	27.9	6.7	9.0	13.2	95.9	14.0	94.1	291.5
Indirect costs			83.9	40.9	(42.9)	28.7	6.9	9.4	13.7	123.3	15.6	120.3	342.2
Annuity-funded total¹	1054.1	595.8	1952.6	724.4	(1228.3)	494.9	118.0	121.8	178.1	1001.6	426.0	763.8	2414.0
Total costs²	3258.2	3225.3	4433.9	3608.0	(825.9)	2822.6	2252.6	2516.2	2357.6	3523.8	2963.5	3422.0	5097.3

1. The 2017/18 and 2018/19 costs reflect the QCA's 2020–24 irrigation price investigation final recommendations, which included adjustments to Sunwater's actual costs. Sunwater has provided cost information at the lowest level of granularity available.

2. Excludes recreational facility costs from 2020/21.

Appendix 3—Comparison of forecast and actual annuity-funded projects for 2019/20

The below table sets out the major annuity-funded projects planned for the Nogoia Mackenzie Bulk Water Service Contract in 2019/20 and the actual projects undertaken.

Project	Forecast \$'000	Actual \$'000	Commentary
Fairbairn Dam – Town Water Supply (TWS) control system and related works (19NMA13, 20NMA19, 20NMA20, 20NMA21 and 20NMA22)	1174	6	Negotiations with the Central Highlands Regional Council regarding the handover of the town water supply facilities were not finalised. The costs incurred related to the engagement of a contractor to assess the replacement of the water treatment plant control system, before the project was put on hold.
Fairbairn Dam – Bathymetric survey (20NMA02)	292	149	Contractor costs were lower than expected.
Comprehensive inspections – 4 weirs (20NMA08, 20NMA09, 20NMA10 and 20NMA11)	122	126	The comprehensive inspections were delivered in line with the budget.
Bedford Weir – Refurbish trash racks (20NMA07)	47	14	Contractor and material costs were lower than anticipated.
Tartrus Weir – Protection works (20NMA12)	47	27	Contractor and material costs were lower than anticipated.
Bedford Weir – Refurbish inlet baulks (20NMA06)	44	19	Contractor and material costs were lower than anticipated.
Fairbairn Dam – Saddle Dam 2 bulkhead (20NMA13)	34	78	Contractor and material (design, fabrication and installation) costs were higher than anticipated. The Sunwater procurement matrix was followed in the selection of the contractor and final design.
Other works	193	113	<p>Cost variances were due to:</p> <ul style="list-style-type: none"> higher than expected labour costs to refurbish the outlet works at Bingegang Weir because of additional cracks that needed to be repaired following blasting of the gates (20NMA04, \$10k above forecast) lower than anticipated contractor and material costs to repair the inlet tower bridge and perform other minor works at Fairbairn Dam (20NMA03, \$17k less than forecast) the deferral of a project to replace the spillway access ladder at Fairbairn Dam to 2020/21 due to access issues (14NMA08, \$14k) lower than anticipated contractor and material costs to replace the corroded roofing sheets on the storage shed at Tartrus Weir (20NMA05, \$2k less than forecast) the deferral of a project to assess piezometer data to 2020/21 due to low water levels (20NMA14, \$20k). <p>In addition, the contingency amount of \$39k was not used in this scheme.</p>

Project	Forecast \$'000	Actual \$'000	Commentary
Non-scheduled works	-	191	<p>The following non-scheduled works were undertaken in 2019/20:</p> <ul style="list-style-type: none"> • a bathymetric survey of the Selma and Town Weirs to assess the current storage capacities (20NMA27, \$89k) • replacement of the filter media in sand filters 1 and 2 at the water treatment plant at Fairbairn Dam to reduce public health risks (20NMA28, \$79k). <p>Works were also carried over from 2018/19 in relation to the Fairbairn Dam comprehensive risk assessment (18NMA13, \$23k).</p>
2019/20 Total	1953	724	

Appendix 4—Annuity-funded projects for 2020/21 to 2025/26

The below table sets out Sunwater’s currently planned annuity-funded projects for the 2020/21 to 2025/26 period for this scheme. While the immediate program is well defined, estimates become more uncertain further into the planning timeline. Forecasts are likely to change in future S&PPs, reflecting changes in project delivery timing; asset condition and risk updates; outcomes from scheduled asset inspections; and customer feedback.

Year	Project title	Project scope	Forecast \$'000
2020/21	Meter replacements	Upgrade program to replace customer river meters with Australian Standard (AS) 4747 compliant equipment.	101
	Bingegang Weir – Screen and structure refurbishments	Outlet works (inlet and outlet) screen refurbishments to retain function and condition, and reinstatement of downstream protection elements to ensure ongoing erosion protection.	80
	Arc flash study	Audit and review of all scheme switchboards and distribution boards to reassess arc flash rating in accordance with Australian Standards.	66
	Asset revaluation	Revalue the assets for insurance purposes; update asset replacement costs and Bill of Materials; and identify gaps in asset hierarchy data.	47
	Tartus Weir – Protection works	Repair of downstream left bank rock mattresses and rockfill elements to ensure ongoing protection of the weir foundations and abutments.	35
	Bedford Weir – Protection works	Repair of downstream rock mattresses and rockfill elements to ensure ongoing protection of the weir foundations and abutments.	34
	Selma Weir – Structure repairs	This project involves the repair of numerous minor concrete surface defects at the weir based on inspection reports.	30
	Fairbairn Dam – Selma inlet channel	This work involves Fairbairn Dam bank repairs to rectify a right bank slump and ensure continued reliable delivery to the Selma channel system.	21
	Fairbairn Dam – Instrumentation	Detailed review and analysis of Fairbairn Dam piezometer performance to recommend if any further instrumentation works are necessary to ensure continued effective surveillance of the embankment performance.	20
	Fairbairn Dam – Spillway access	Replacement of the obsolete spillway access ladder (post recent spillway upgrade works) to ensure suitable and safe inspection access.	15
	Other works	The balance of the 2020/21 program consists of a contingency amount for unplanned capital replacements.	46
	2020/21 Total		495
2021/22	Meter replacements	Upgrade program to replace customer river meters with AS4747 compliant equipment.	109
	Bingegang Weir – Outlet works	Scheduled refurbishment of the 600DIA low level outlet conduit. Works will be subject to inspection (2020), with timing and scope to be developed accordingly.	13

Year	Project title	Project scope	Forecast \$'000
	2021/22 Total		122
2022/23	Fairbairn Dam – Structure	The work is to resurvey the site after five years to check for any movement, then complete the remainder of the benching work on the face subject to a renewed risk assessment. The timing and scope of works will be subject to an inspection and a risk/benefit review.	532
	Fairbairn Dam – Comprehensive inspection	Sunwater conducts comprehensive inspections on our dams every five years to comply with the dam safety condition schedules attached to the dam. This allows us to maintain current knowledge of the asset condition and risks, so projects can be brought in and deferred as needed to maintain the asset in serviceable condition.	138
	Fairbairn Dam – Guard gate refurbishments	Scheduled refurbishment of Saddle Dam 2 (Selma) guard gates—blast, paint, anodes and fixings—to reinstate gate condition and service life.	91
	Fairbairn Dam – Gate hoist refurbishments	Scheduled refurbishment of Saddle Dam 2 (Selma) guard gate hoist motors/electrics and ropes to maintain function and safety.	76
	Fairbairn Dam – Bridge inspections	The inlet tower and spillway bridges require third-party inspection (Level 2) to ensure continued safe operation and compliance.	54
	Meter replacements	Upgrade program to replace customer river meters with AS4747 compliant equipment.	55
	Selma Weir – Outlet works	Scheduled replacement of 300DIA outlet works valve and refurbishment of outlet works conduit (subject to condition assessment).	56
	Other works	There are no other annuity-funded projects planned for 2022/23.	-
		2022/23 Total	
2023/24	Fairbairn Dam – Road refurbishment	Scheduled refurbishment and grading of access roads and tracks to the dam’s facilities and embankments to maintain condition and safe access.	133
	Fairbairn Dam – Regulating gate refurbishments	Planned refurbishment of the left and right-hand Selma Channel inlet vertical slide gates to ensure continued function and condition.	104
	Fairbairn Dam – Fencing refurbishment	Refurbishment and repair of fencing lines, posts and gates at various locations around the dam and associated infrastructure.	43
	Fairbairn Dam – Saddle Dam 2 screen and guide refurbishments	Refurbishment of trash racks and guides in Saddle Dam 2. If the condition assessment closer to 2023 determines they remain in a serviceable condition, the funds will remain in the annuity.	37
	Fairbairn Dam – Options analysis	Options analysis to consider the most prudent and efficient methodology to refurbish the upstream and downstream main embankment rock rip rap.	32
	Fairbairn Dam – Right bank screens	Scheduled refurbishment of the right bank inlet screens (Weemah)—removal, cleaning and patch painting—to ensure continued function and maximise service life.	31
	Other works	The balance of the 2023/24 program consists of refurbishing two gauging station platforms and stairways, patch painting trash racks and Bedford Weir weep hole cleaning.	46
		2023/24 Total	

Year	Project title	Project scope	Forecast \$'000
2024/25	Fairbairn Dam and Selma, Bedford and Tartrus Weirs – Sign upgrades	Scheduled upgrade of site signage to comply with current Sunwater standards and manage operational and public risk.	361
	Bedford, Bingegang, Tartrus and Selma Weirs – Comprehensive inspections	Sunwater conducts comprehensive inspections on major weirs every five years to ensure business and community risks are managed. This allows us to maintain current knowledge of the asset condition and risks, so projects can be brought in and deferred as needed to maintain the asset in serviceable condition.	140
	Bedford Weir – Road refurbishments	Scheduled refurbishment of the weir access tracks and parking areas to ensure continued safe access for plant and equipment to service the weir abutments and outlet works.	55
	Tartrus Weir – Options study	Options study to review the benefits of upgrading to remote operation and automation of outlet works.	41
	Fairbairn Dam – Saddle Dam 2 light and power replacement	Scheduled replacement of control building light and power services, subject to a condition assessment and compliance and risk review.	34
	Fairbairn Dam – Left bank siphon	Scheduled refurbishment of the left bank siphon vacuum pump and arrangement to ensure continued reliable supplementation of right bank river releases during low storage level periods.	33
	Tartrus Weir – Instrumentation	Scheduled replacement of the weir's gauge boards to ensure accurate storage level indication and safe access.	32
	Bingegang Weir – Supervisory control and data acquisition (SCADA) replacement	Scheduled replacement of the weir SCADA computer (hardware and software) to ensure continued serviceability and support for surveillance and control.	19
	Other works	The balance of the 2024/25 program includes Nogoia Supply telemetry and other minor metal works.	49
	2024/25 Total		764
2025/26	Fairbairn Dam – Road repairs/refurbishment	Scheduled repair or refurbishment of the dam's access roads (various locations), including reinstatement of pavement/drainage works, re-grading and protection works. The scope and timing of works is to be informed by condition assessment.	725
	Bingegang Weir – Structure	Scheduled refurbishment of the upstream and downstream faces and crest of the weir concrete sections, inlet and outlet structures and various other minor works. Works will be subject to prior condition and risk assessment. Timing and scope of works will be subject to changes as required.	552
	Fairbairn Dam – Outlet works	Scheduled refurbishment of the right bank (Weemah) outlet conduit. Works will be informed by internal inspection and assessment undertaken as part of the 2022/23 five-yearly comprehensive inspection and subject to scope, timing and budget changes.	383
	Fairbairn Dam – Survey	Scheduled periodic (10 year) crest level survey of main and saddle dams to confirm elevations and freeboard and inform dam safety analysis. The timing and scope of works will be subject to review of the business/risk benefits against existing annual deformation survey levels and checks.	205
	Fairbairn Dam – Selma controls	Scheduled replacement of the Selma Gate House control system equipment (hardware and software). Project will include a review of control system functional requirements and connectivity to the broader SCADA network.	127
	Fairbairn Dam – Electrical option analysis	Options analysis to determine the most cost-effective replacement strategy for the cables, switchboards and lighting systems to define scope, costs and timing of replacement equipment.	78

Year	Project title	Project scope	Forecast \$'000
	Bedford Weir – Outlet works	Scheduled refurbishment of trash racks, valves and fixings based on asset life to ensure continued function and safety.	75
	Fairbairn Dam – Instrumentation	Scheduled replacement of main wall instrumentation equipment based on service life. The scope, timing and type of instrumentation will be determined as part of the project and subject to change.	62
	Asset revaluation	Revalue the assets for insurance purposes; update asset replacement costs and Bill of Materials; and identify gaps in asset hierarchy data.	54
	Fairbairn Dam – Spillway	Replacement of spillway access fall arrest system, subject to a new risk assessment. Scope, timing and budget are subject to change.	29
	Bingegang Weir – Business case	Review of costs and benefits in the installation of remote actuation of the left bank outlet works and inclusion of CCTV.	27
	Other works	The balance of the 2025/26 program includes minor SCADA equipment replacements, control building refurbishments and facility electrical inspections.	97
	2025/26 Total		2414

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